

## **TGas-1031 On-line Gas Transmitter**



### **Brief Introduction**

TGas-1031 on-line gas transmitter which adopts high performance sensor unit can continuously measure the concentration of gas on site and convert the concentration signal into digital or analog signal output(4-20mA analog signal,RS485 communication signal and switch quantity alarm signal to transmit remotely and drive).

It is widely used in such industries such as petroleum, chemical, natural gas, coal, metallurgy, electric power, municipal administration, telecom,tunnel construction,gas storage station, special plants and other places where flammable gases or toxic and harmful gases exist.

### **Main Features**

- ◆ Two kinds of optional mode of power supply, including centralized busbar type and independent area type
- ◆ High and low concentration alarm, performing real-time monitor to gas
- ◆ Anti-poisoning type gas sensor with high sensitivity
- ◆ Automatic modification of ageing curve of sensor, keeping constant alarm sensitivity
- ◆ Function of automatic recognition of sensor trouble, function of high concentration gas above-norm of sensor
- ◆ Function of automatic detection at starting up, and it has advanced function of self-diagnosis and self-repairing
- ◆ The calibrated concentration value is adjustable, facilitating users to set by themselves
- ◆ When the sensor loses the function of monitoring alarm because of ageing, the detector is capable of automatic recognition and alarm, so as to avoid missing report effectively

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**Technical Parameters**

Parameters	Characteristics
Detectable gas	Flammable gases, oxygen, poisonous and harmful gases
Measurement precision	$\pm 5\% \text{ F.S}$
Repeatability	2%
Measurement range	Refer to lectotype table for details
Response time	$< 30\text{s}$ (T90)
Sampling method	Diffusion
Working environment	Temperature: $-30^{\circ}\text{C} \sim 60^{\circ}\text{C}$ humidity: below 85% (non condensation)
Remote control mode	By the adjustment mode by infrared remote control, the detector can be adjusted without opening of cover
4 ~ 20mA output	4~20mA output corresponding to 0 ~ 100% maximum load 800 ohms
Alarm output	The effective alarm is 1 point or 2 points; each alarm shall use SPDT electronic relay. Contact rating of alarm relay: Ohmic load: 5A@24VDC or 120VAC or 240VAC Inductive load: 50VA
Communication	Communication description: three-wire system parallel RS485 protocol, 32 points at most Connection: Twisted pair with shield Distance: maximum 1000m
Input voltage	24VDC $\pm 25\%$ ; power: 2W/way
Explosion-proof shell	Explosion-proof grade: ExdIICT5 Protection class: IP66
Using cable	$\geq 2.5\text{mm}^2 \times 4$ screened cable line, outside diameter of cable is required to be between 6mm~9mm

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**Lectotype Table(part gas)**

Model	Range	Low alarm setting range	High alarm setting range	Low alarm point	High alarm point
TGas-1031-FL	0~100%LEL	5%~10%LEL	25%~80%LEL	20%LEL	50%LEL
TGas-1031-H <sub>2</sub>	0~1000ppm	100ppm~300ppm	400ppm~600ppm	100ppm	500ppm
TGas-1031-O <sub>2</sub>	0~30% vol	16%~19.5% vol	22.5%~24% vol	19.5% vol	23.5% vol
TGas-1031-CO-1	0~500ppm	25ppm~100ppm	100ppm~500ppm	35ppm	200ppm
TGas-1031-CO-2	0~1000ppm	25ppm~100ppm	100ppm~500ppm	35ppm	200ppm
TGas-1031-CO <sub>2</sub> -1	0~5% vol	1000~2500ppm	2500~5000ppm	1500ppm	2500ppm
TGas-1031-CO <sub>2</sub> -2	0~20% vol	4%~8%	8%~16%	5%	10%
TGas-1031-CO <sub>2</sub> -3	0~65% vol	13%~26%	26%~52%	15%	30%
TGas-1031-CO <sub>2</sub> -4	0~100% vol	20%~40%	40~80%	30%	50%
TGas-1031-H <sub>2</sub> S	0~100ppm	5ppm~15ppm	15ppm~30ppm	10ppm	15ppm
TGas-1031-SO <sub>2</sub>	0~20ppm	1ppm~3ppm	3ppm~10ppm	2ppm	5ppm
TGas-1031-CL <sub>2</sub>	0~10ppm	0.5ppm~3.5ppm	4ppm~6ppm	0.5ppm	5ppm
TGas-1031-NH <sub>3</sub>	0~100ppm	20ppm~30ppm	30ppm~70ppm	25ppm	50ppm
TGas-1031-NO	0~250ppm	20ppm~50ppm	50ppm~100ppm	25ppm	50ppm
TGas-1031-NO <sub>2</sub>	0~100ppm	1ppm~2ppm	2ppm~5ppm	1ppm	2ppm
TGas-1031-HCN	0~30ppm	5ppm~10ppm	10ppm~15ppm	5ppm	10ppm
TGas-1031-PH <sub>3</sub>	0~1ppm	0.3ppm~0.5ppm	0.5ppm~0.8ppm	0.3ppm	0.6ppm

**Executed Standards(GB Standard is China National Standard)**

GB12358-2006: *General Technical Requirements for Gas Detector in Workplace Environments*

GB3836.1-2000: *Electrical apparatus for explosive gas atmospheres Part 1 General Requirements*

GB3836.4-2000: *Electrical apparatus for explosive gas atmospheres Part 2 flame-proof type "d"*

The product is inspected and tested by the state legal authority and it pass the explosion-proof certification. The mark of explosion-proof is ExdIICT5.It applies to 0 zone,1 zone,2 zone,the place that contains IIA~IIC category and T1~T5 group of explosive gas mixture.It is qualified to get explosion-proof conformity certificate through inspection by CQST.Protection class of shell is IP66.

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